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EXAMINER	
FISHER, ABIGAIL L	

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/505,415	KATUSIC ET AL.	
	Examiner	Art Unit	
	ABIGAIL FISHER	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-12 and 16-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-12 and 16-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt of Amendments/Remarks filed on March 26 2009 is acknowledged. Claims 2 and 13-15 were/stand cancelled. Claim 8 was amended. Claim 36 was added. Claims 1, 3-12 and 16-36 are pending.

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Based on applicants' arguments regarding the rejection on the grounds of nonstatutory obviousness-type double patenting, the examiner has determined that a second action non-final is warranted.

Specification

Acknowledgment is made of amendments to the specification filed on March 26 2009, which provides a brief description of the drawings.

Modified Objection

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d) and MPEP § 608.01(o). Specifically, the instant specification fails to provide antecedent basis for claims 16, 18, 20, 22-24 and 26. The instant specification indicates that the powder of the invention can be used as a sunscreen, as a vulcanizing agent, a dye in inks, in synthetic resins, in

pharmaceutical and cosmetic preparations, as a ceramic raw material, and as a catalyst. However, the specification fails to provide antecedent basis for the methods claimed. The examiner suggests adding the claims to the instant specification.

Response to Arguments

Applicants argue that on page 6, lines 12-15 of the specification that the powder according to the invention can be used as a sunscreen, a vulcanizing agent, a dye in inks, in synthetic resins, in pharmaceutical preparations, as a ceramic raw material and as a catalyst. Therefore, applicants argue that they have support for the products and methods claimed in claims 16-26.

Applicants' arguments filed March 26 2009 have been fully considered but they are not persuasive.

While the examiner agrees upon reconsideration that the specification provides support for the products, the instant specification fails to provide support for the method of making the products as claimed in claims 16, 18, 20, 22-24 and 26. No where in the specification is support provided for adding the powder to compositions to form a sunscreen for example. Therefore, the specification provides no support for the methods claimed in claims 16, 18, 20, 22-24 and 26.

Claim Objections

The objection of claim 8 because of informalities is **withdrawn** in light of applicants' amendments filed on March 26 2009.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of claims 8-13, 16, 18, 22, 23, 24, 26 and 28-35 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is **withdrawn** in light of Applicants' amendments and arguments filed on March 26 2009.

Modified Rejection based on amendments filed on March 26 2009

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-12, 20-22 and 28-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimaru et al. (US Patent No. 5560871, cited in the Office action mailed February 6 2009) in view of Cyr (US Patent No. 2200873, cited in the Office action mailed February 6 2009) and Hunter (US Patent No. 77618, cited in the Office action mailed February 6 2009).

Applicant Claims

The instant application claims a composition comprising nanoscale pyrogenically produced zinc oxide powder having a BET surface of 10 to 200 m^2/g, wherein said composition is in the form of aggregates of anisotropic primary particles and that the aggregates display an average diameter of 50 to 300 nm wherein the aggregates comprise a mixture of nodular primary particles and acicular primary particles whereby the ratio of nodular to acicular primary particles is between 99:1 and 1:99. The instant application claims a process for the production of the composition wherein zinc powder

is converted to zinc oxide powder in four successive reaction zones which are an evaporation zone, a nucleation zone, an oxidation zone and a quench zone.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Yoshimaru et al. is directed to a method for preparing electrically conductive zinc oxide. It is generally taught that the vapor mixture comprising zinc vapor and vapor of a doping agent can be prepared by injecting through a nozzle the dopant forming material in an inert gas into a stream of the zinc vapor prior to the introduction into an oxidation chamber. Therefore, the mixture comprises zinc vapor, the dopant material and an inert gas. The temperature of the vaporization and entry into the oxidation temperature is maintained at a particular temperature, for instance 910 °C (column 2, lines 21-27). It is taught that the vapor mixture is introduced into an oxidation chamber and mixed with an oxidizing gas injected therein through a nozzle to burn and oxidize the zinc vapor (column 3, lines 48-52). It is taught that the amount of oxidizing gas to be used may appropriate be selected depending on the desired particle size and particle size distribution of the resulting zinc oxide (column 4, lines 5-7). Figure 1 is a diagram of the apparatus used for practicing the method. The apparatus comprising a rectifying column for refining zinc and forming the zinc vapor, a nozzle for injecting a vapor mixture, an oxidation chamber, a nozzle for injecting an oxidizing gas, a tube for introducing cooling air, a bag filter and an aspiration fan (column 4, lines 27-35). In the apparatus a rectifying column for refining zinc is used for generating zinc vapor, but other zinc vapor generating devices such as a retort, a crucible or electric furnace may be used (column 4, lines 50-55). It is taught zinc vapor is preferably not less than 850 °C. This is

because if the temperature of the zinc vapor is less than 850 °C, it is observed that part of the zinc remains unreacted (column 5, lines 10-13). It is taught that the amount of oxidation gas is controlled, preferably an equivalent ratio of oxygen/zinc. If the oxidation of the vapor is too high then the mixture is cooled and the oxidation thereof is sometimes insufficient (column 5, lines 29-40). After oxidation the zinc is cooled with air and collected through a bag filter (column 5, lines 40-45). Example 1 is directed to the formation of conductive zinc oxide. Zinc oxide which had been evaporated and refined was introduced into a mixing zone with a vapor comprising the doping agent, then the vapor was introduced into an oxidation chamber. After the oxidation the zinc vapor was cooled and filtered. Examples 6-11, which are made by the same procedures of example 1 exhibit a BET surface area that fall within those instantly claimed (table 2). The temperature of oxidation is either 40 or 500 °C. It is generally taught that zinc oxides are known to be useful as pigments kneadable with paints and varnishes, resins, rubbers and figures (column 1, lines 21-25).

Ascertainment of the Difference Between Scope the Prior Art and the Claims
(MPEP §2141.012)

Yoshimaru et al. do not specify the conditions for evaporating zinc. However, this deficiency is cured by Cyr and Hunter.

Cyr is directed to zinc oxide. It is taught that zinc that is to be oxidized may be evolved either by volatilizing metal zinc in a suitable type of retort and the zinc vapor evolved is diluted with a non-oxidizing gas. The mixture of zinc vapor and diluting gas is then burned in a slow flame at a controlled temperature above 950 °C but less than 1200 °C to allow for the formation of acicular crystals (column 1, lines 39-55). Diluting

gas examples are atmospheric nitrogen (column 3, lines 33-34). It is taught that when the combustion chamber is maintained in the lower range, say only slightly above 950 °C, long thin acicular crystals are obtained (column 4, lines 69-71). At higher temperatures growth is intensified and plates and spear-headed shaped crystals are formed (column 5, lines 5-7). High turbulence in the combustion chamber produces more complex and irregular crystals (column 5, lines 12-13).

Hunter is directed to the manufacture of zinc. It is taught that deoxidizing gas includes hydrogen (line 14).

Finding of Prima Facie Obviousness Rationale and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Yoshimaru et al., Cyr and Hunter and utilize a retort with hydrogen and nitrogen as non-oxidizing gases. One of ordinary skill in the art would have been motivated to utilize a retort with non-oxidizing gases as Yoshimaru et al. teach that the zinc vapor may be formed in a retort and Cyr teaches forming zinc vapor in a retort utilizing non-oxidizing gas such as nitrogen in order to ensure that the zinc vapor does not convert to zinc oxide before it is desirable to convert it. One of ordinary skill in the art would have been motivated to utilize hydrogen as it is taught by Hunter as a deoxidizing gas that is utilized in the manufacture of zinc. Therefore, since both nitrogen and hydrogen are known in the art as non-oxidizing gases, it would have been obvious to one of ordinary skill in the art utilize both gases. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third

composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06.** It would have been obvious to one of ordinary skill in the art to burn the zinc vapor in a slow flame in order to form acicular zinc oxide as taught by Cyr.

Regarding the claimed particle shape, since the process taught by Yoshimaru et al. is substantially similar to that instantly claimed, it is the examiner's position that the particle shape will be the same as instantly claimed. Furthermore, based on the teachings of Cyr, one of ordinary skill in the art would have been motivated to maintain the temperature in the range taught by Cyr in order to form acicular particles or adjust it higher or utilize high turbulence in order to change the shape of the crystals.

Regarding the claimed particle size, it is the examiner's position that the position that the particle size of the zinc oxide of the particles of Yoshimaru et al. are the same as instantly claimed since the process taught by Yoshimaru et al. is substantially similar to that instantly claimed. Furthermore based on the teachings of Yoshimaru, it would have been obvious to one of ordinary skill in the art to manipulate the amount of oxidizing gas used depending on the desired particle size and particle size distribution of the resulting zinc oxide.

Regarding the claimed anisotropic structure, oxygen concentration at the surface of the powder, transmission at a wavelength of 310 nm and 360 nm and the bulk density, it is the examiner's position that the particles of Yoshimaru et al. are the same

as instantly claimed since the process taught by Yoshimaru et al. is substantially similar to that instantly claimed.

Regarding claims 10-12 and 29-35, based on the teachings of Yoshimaru et al. and Cyr the temperature in the evaporation zone is higher than 850 °C, in order to form acicular crystals as well in order to make sure all of the zinc is reacted. The oxidation temperatures of Yoshimaru et al. are 500 °C. Furthermore, based on the teachings of Yoshimaru et al. and Cyr it would have been obvious to one of ordinary skill in the art to optimize the temperatures in order to ensure one gets the desired shape as well as complete reaction. It would have been obvious to one of ordinary skill in the art to optimize the cooling rate as temperature and cooling are parameters that are taught as specifically controlling the shape of the particles and the reaction. Yoshimura et al. teaches that the zinc is first converted into a vapor and then mixed with the doping material then oxidized and then filtered. As can be seen in the apparatus of Figure 1, the zinc vapor flows through the whole device and there is necessarily some time that the zinc vapor is spent in each compartment.

As taught by Yoshimura et al., zinc oxide is known in the art to be utilized as pigments kneadable with paints and varnishes and resins. Therefore, it would have been obvious to one of ordinary skill in the art to add zinc oxide to paints, varnishes or resins in order to make these respective compositions as these are known uses for the zinc oxide.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the

instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Claims 16-19 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimaru et al. in view of Cyr and Hunter and in further view of Laundon (US Patent No. 5876688, cited in the Office action mailed February 6 2009) or Wang et al. (J. Applied Polymer Science, 1998, cited in the Office action mailed February 6 2009) or Spencer (Topics in Catalysis, 1999) or Jenkins et al. (US Patent No. 4448608, cited in the Office action mailed February 6 2009).

Applicant Claims

Applicants claim a sunscreen comprising the produced zinc oxide and a method for producing a sunscreen. Applicants claim a method for vulcanizing and a vulcanizing agent comprising the produced zinc oxide. Applicants claim a method for dying or pigments and a dye or pigment comprising the produced zinc oxide. Applicants claim a method for preparing synthetic resins comprising the produced zinc oxide. Applicants claim a method for producing a pharmaceutical or cosmetic preparation comprising the produced zinc oxide. Applicants claim a method for producing ceramics and ceramic raw material comprising the produced zinc oxide. Applicants claim a method for producing a catalyst and a catalyst comprising the produced zinc oxide.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Yoshimaru et al., Cyr and Hunter are set forth above. Yoshimaru et al. describes a process for forming zinc oxide. Cyr and Hunter teach the formation of zinc vapor utilizing a retort and non-oxidizing gases.

Ascertainment of the Difference Between Scope the Prior Art and the Claims *(MPEP §2141.012)*

Yoshimaru et al., Cyr and Hunter do not specify that the zinc oxide can be utilized in sunscreen formulations, as a vulcanizing agent, a dye or pigment formulation. a synthetic resins, a pharmaceutical or cosmetic preparation, ceramic raw material, or a catalyst. However, these deficiencies are cured by Laundon et al., Wang et al., Spencer and Jenkins et al.

Laundon et al. is directed to zinc oxide and a process of making it. It is taught that zinc oxide is known to be utilized in applications where effective absorption of ultra-violet radiation is desirable such as sunscreens, paints, cosmetics, etc. (column 1, lines 9-15).

Wang et al. teach that vulcanizing of polychloroprene with metal oxides is well studied (page 1220, left column, second paragraph). Exemplified vulcanization process includes the addition of zinc oxide (experimentals).

Spencer teaches that zinc oxide is known to be utilized as a catalyst for methanol synthesis (introduction).

Jenkins et al. teach that complexes with zinc oxides are suitable for use as a pigment in a wide variety of applications such as paints and ceramics (abstract).

Finding of Prima Facie Obviousness Rationale and Motivation

(MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Yoshimaru et al., Cyr, Hunter and Laundon et al. or Wang et al. or Spencer or Jenkins et al. and utilize zinc oxide in a method of producing a sunscreen, a method for vulcanizing, a method for pigments, a method for preparing a synthetic resin, a method for producing a cosmetic, a method of producing a ceramic or a method for producing a catalyst. One of ordinary skill in the art would have been motivated to add zinc oxide to a sunscreen, to a vulcanizing process, to paints or varnishes, to resins, to cosmetic formulations, to ceramic formulations and catalyst formulations. One of ordinary skill in the art would have been motivated to utilize zinc oxide in any of these methods or formulations as they are all known uses for zinc oxide. Therefore, it would have been obvious to utilize zinc oxide in known methods or formulations.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicants argue that Yoshimaru et al. omits a critical step of nucleation zone and cooled to temperatures below the blowing point of zinc in order to facilitate the formation of zinc crystallites.

Applicants' arguments filed March 26 2009 have been fully considered but they are not persuasive.

Firstly the examiner would like to indicate that the current claims do not require the formation of zinc crystallites. The argument may be made that this would necessarily occur as the temperature of the zinc vapor cools to temperatures below the boiling point of zinc. However, the instant claims do not require that the zinc vapor is cooled to a temperature below the boiling point of zinc. As currently written, claim 8 recites that the hot reaction mixture arrives from the evaporation zone and "cools to temperatures below the boiling point of zinc ***or*** is cooled by means of an inert case. Therefore, the requirements of the nucleation zone is that the hot reaction mixture either cools to a temperature below the boiling point of zinc or the hot reaction mixture is cooled by means of an inert gas. The second option requires no specific reduction of temperature only that it is cooled. Yoshimaru et al. teach formation of a zinc vapor using a rectifying column, but other sources can also be used as taught by Yoshimaru et al. This formation of the zinc vapor equates to the claimed evaporation zone. Then to this zone a combination of inert gas and doping agent are introduced. Therefore, Yoshimaru et al. teach introduction of inert gas to the zinc vapor. Zinc the dopant and inert gas are not heated when they are mixed with the zinc vapor the zinc vapor would necessarily cool to some degree. Since the instant claims require no temperature reduction via the alternative language of claim 8, the addition of the inert gas and the doping material results in the claimed nucleation zone.

Therefore, the rejection is maintained since applicant has not provided any persuasive arguments to overcome the rejection.

Modified Rejection based on arguments and amendments filed on March 26 2009

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-12, 16-17 and 28-36 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 7235298 (which is application No. 10/522778) in view of Yoshimaru et al. (US Patent No. 5560871). Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims overlap in scope.

The instant application claims a composition comprising nanoscale pyrogenically produced zinc oxide powder having a BET surface of 10 to 200 m^2/g, wherein said composition is in the form of aggregates of anisotropic primary particles and that the aggregates display an average diameter of 50 to 300 nm wherein the aggregates comprise a mixture of nodular primary particles and acicular primary particles whereby the ratio of nodular to acicular primary particles is between 99:1 and 1:99. The instant application claims a process for the production of the composition wherein zinc powder is converted to zinc oxide powder in four successive reaction zones which are an evaporation zone, a nucleation zone, an oxidation zone and a quench zone.

Patent '298 claims pyrogenically prepared doped zinc oxide powder. The claimed particles have overlapping diameters and BET surface area. The particles are claimed as having a largely anisotropic structure defined by a form factor F(circle) of less than 0.5. The process for preparing the particles are the same as instantly claimed expect the evaporation zone instantly claimed is called a vaporization zone in Patent '298.

The difference between Patent '298 and the instant application is that Patent '398 does not expressly state aggregates comprising a mixture of nodular and acicular primary particles. Patent '298 additionally claims the presence of a doping agent.

Regarding the claimed particle shapes, since the process of making the particles of Patent '298 is the same as instantly claimed it is examiner's position that the shape of the particles are necessarily the same. While Patent '298 does additionally claim a

doping agent, the instant claim language is open ended and therefore allows for additional ingredients such as a doping agent to be included.

While the instant invention does not claim the incorporation of a doping agent, this deficiency is cured by Yoshimaru et al.

Yoshimaru et al. is directed to the preparation of electrically-conductive zinc oxide. It is taught hat zinc oxides are useful as pigments kneadable with paints and varnishes, resins, rubbers and fibers and there has been desired for the development of zinc oxides having excellent electrically conductivity, in particular, in antistatic applications (column 1, lines 21-30). Fine substances capable of imparting electrical conductivity through their incorporation include metal particles such as zinc oxide doped with aluminum (column 1, lines 38-52).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of the instant invention and Yoshimaru et al. and utilize a doping agent in the formation of the zinc oxide particles. One of ordinary skill in the art would have been motivated to utilize a doping agent in order to render eclectically conductive particles for use in antistatic applications based on the teachings of Yoshimaru et al.

Therefore, the scopes of the patent claims and the instant application overlap and thus they are obvious variants of one another.

Response to Arguments

Applicants argue that since Patent '298 is a later filed application, a two-way obviousness is required. Based on applicants' arguments, the examiner has amended the non-statutory double patenting rejection to be that of a two-way obviousness rejection.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABIGAIL FISHER whose telephone number is (571)270-3502. The examiner can normally be reached on M-Th 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abigail Fisher
Examiner
Art Unit 1616

AF

/Mina Haghighatian/
Primary Examiner, Art Unit 1616